

PATENT APPLICATION

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PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

On Appeal from Group: 2871

Kazuhiro ASADA

Application No.: 09/899,919

Examiner: R. H. Kim

Filed: July 9, 2001

Docket No.: 110064

For: OPTICAL CONNECTOR

APPEAL BRIEF TRANSMITTAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto are three (3) copies of our Brief on Appeal in the above-identified application.

Also attached hereto is our Check No. 154459 in the amount of Three Hundred Thirty Dollars (\$330.00) in payment of the Brief fee under 37 CFR 1.17(c). In the event of any underpayment or overpayment, please debit or credit our Deposit Account No. 15-0461 as needed in order to effect proper filing of this Brief.

For the convenience of the Finance Division, two additional copies of this transmittal letter are attached.

Respectfully submitted,

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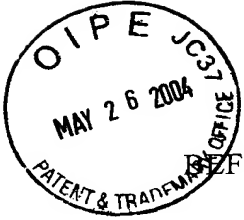
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PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of:

Kazuhiro ASADA

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BRIEF ON APPEAL

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I. INTRODUCTION

This Appeal is from an Office Action mailed November 13, 2003, finally rejecting claims 1-4 of the above-identified patent application. No claims are allowed, and claim 5 is allowable.

A. Real Party in Interest

The Real Party in Interest for this Appeal and the present application is Autonetworks Technologies, Ltd., Sumitomo Wiring Systems, Ltd., and Sumitomo Electric Industries, Inc., by way of an assignment recorded in the U.S. Patent and Trademark Office at Reel 011974, Frame 0059.

B. Statement of Related Appeals and Interferences

There are presently no Appeals or Interferences, known to Appellant, Appellant's representative or the assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

C. Status of Claims

Claims 1-5 are pending. Of these, claims 1-4 stand finally rejected and are on appeal. The claims on appeal are set forth in the attached Appendix. Claim 1 is independent. Claims 2-5 directly depend from claim 1.

D. Status of Amendments

Appellant's application was filed July 9, 2001 with independent claim 1 and dependent claims 2-4, and claimed priority from Japanese Patent Application No. 2000-044351 filed February 22, 2000. An Office Action rejecting claims 1-5 was issued on September 25, 2002. An Amendment under 37 CFR §1.111 with Appendix and a Request for Approval of Drawing Corrections were filed in the U.S. Patent and Trademark Office on November 21, 2002 in response to the September 25, 2002 Office Action and were entered. The November 21, 2002 Amendment amended claim 1.

A Final Office Action rejecting claims 1-5 was issued on January 9, 2003. A personal interview was held on February 13, 2003 between Appellant's representatives and Examiners Kim and Kim. An Amendment After Final Rejection under 37 CFR §1.116 with Appendix were filed on April 7, 2003. An Advisory Action was mailed May 6, 2003. A Request for Continued Examination with Petition for Extension of Time were filed June 4, 2003 entering the April 7, 2003 amendments to claim 1-4. A telephone interview was held on June 17, 2003 between Appellant's representative and Examiner Kim.

An Office Action rejecting claims 1-4 and objecting to claim 5 was issued July 1, 2003. A Request for Reconsideration was filed October 1, 2003. A personal interview was held on October 22, 2003 between Appellant's representative and Examiner Kim. A Final Office Action finally rejecting claims 1-4 and objecting to claim 5 was issued November 13, 2003. A Request for Reconsideration was filed February 12, 2004. A personal interview was held on February 18, 2004 between Appellant's representative and Examiner Kim. An Advisory Action was issued March 4, 2004. A Notice of Appeal was filed on April 13, 2004.

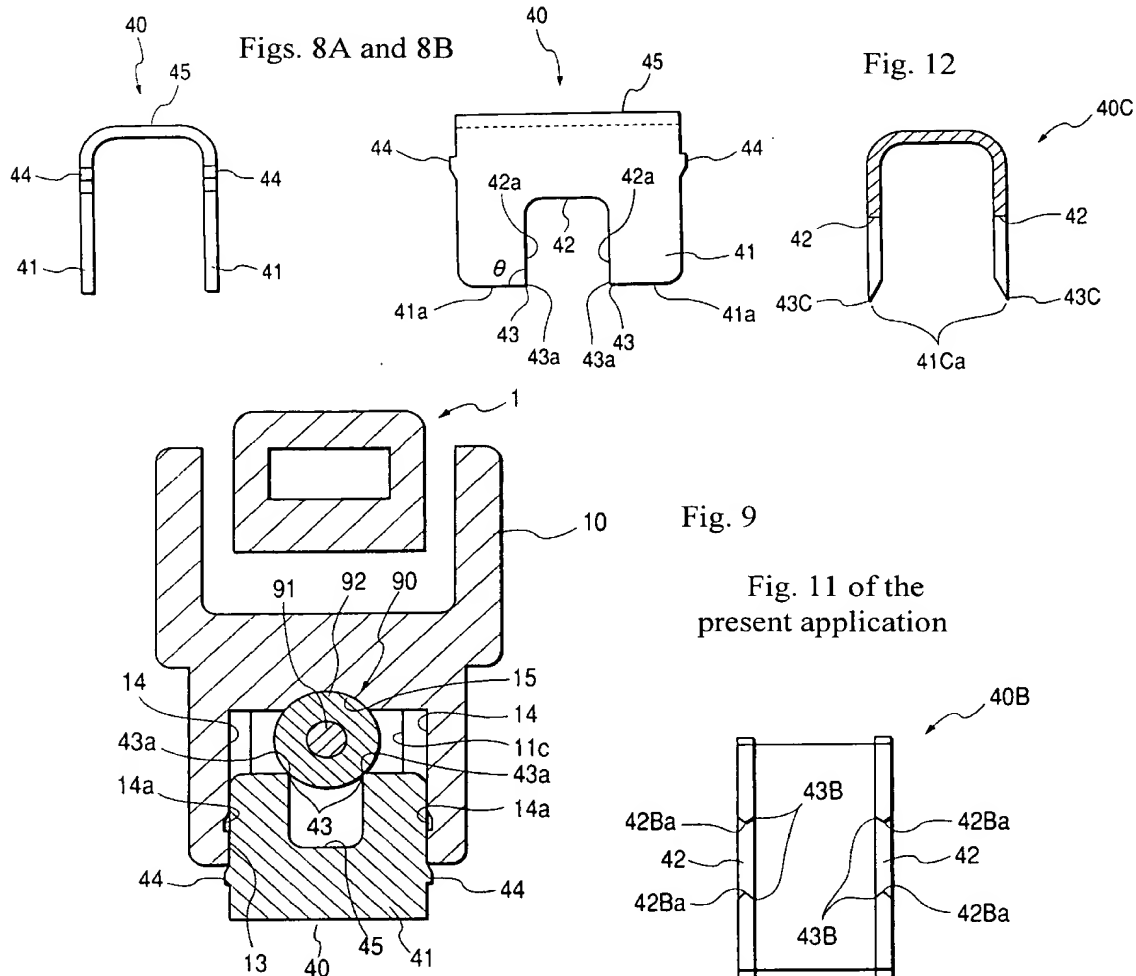
II. SUMMARY OF THE INVENTION AND APPLIED REFERENCES

A. The Invention

An optical connector 1 for holding an optical fiber cord 90 is described in the specification as having a module-side optical connector 50 with a housing 10. The cord 90, having an optical fiber 91 sheathed by a covering portion 92, is optically coupled to a photoelectric device D. A stopper 40, insertable into a mounting hole 13 of the housing 10, secures the cord 90. See page 9, line 18 – page 10, line 13 and Fig. 2 of the specification.

The stopper 40 forms plate-like portions 41 joined by an interconnecting piece 45, forming a U-shape. The plate-like portions 41 each form a generally square plate with a positioning slit 42 flanked by blade portions 43. The plate-like portions 41 have distal end edges 41a, while the positioning slits 42 have side edges 42a perpendicular to the distal end

edges. The distal end edges 41a and side edges 42a intersect to form a right-angle corner at edge portions 43a. See page 11, line 17 – page 21, line 10 and Figs. 8a–10 of the specification.



When the stopper 40 is inserted into the mounting hole 13, the blade portions 43 cut into the covering portion 92, pushing the cut residue forward and securing the cord 90 in its axial position in the optical connector 1. See page 15, line 7 – page 16, line 1 and Fig. 9 of the specification. The stopper 40 further includes retaining engagement piece portions 44 on the opposite side edges of each plate-like portion 41. The plate-like portions 41 abut against retaining grooves 14 of the housing while the stopper 40 is inserted. When the stopper 40 is completely inserted into the mounting hole 13, the retaining engagement piece

portions 44 engage with engagement recesses 14a, thereby locking the stopper 40 from withdrawal. See page 12, line 19 – page 13, line 7 and Figs. 8B and 9 of the specification.

In various alternate embodiments, a stopper 40B further includes gabled edges 42Ba that taper towards the inside of each positioning slit 42, enabling more concentrated force applied to cut the covering portion 92. A stopper 40C includes distal end edge portions 41Ca that taper towards the distal ends of each plate-like portion 41. The blade portions 43C penetrate into the covering portion 92 with force concentrated along the outward edge of the stopper 40C. See page 17, line 18 – page 18, line 18 and Figs. 11–12.

Consequently, Appellant's teaches secure retention of the cord 90 with reduced radial compression to the optical fiber 91 as compared to the prior art. See page 16, lines 15-22 of the specification.

B. The Claims

The claimed subject matter is directed to an optical connector having a housing and a stopper. The housing includes a cord receiving hole portion and a mounting hole. The cord receiving hole portion receives an optical fiber cord to be inserted along an axis of the optical fiber cord in a cord insertion direction. The mounting hole is disposed along the cord receiving hole portion.

When the stopper is inserted into the mounting hole along the cord receiving hole portion, the blade portions penetrate into a covering portion of the optical fiber cord, with the positioning slit being perpendicular to the axis of the optical fiber cord. According to the claimed subject matter, each blade portion removes a portion of the covering portion, thereby fixing the optical fiber cord along the axis of the optical fiber cord, as recited in claim 1.

In addition, claim 2 is directed to the stopper including a pair of the plate-like portions interconnected by an interconnecting piece portion in parallel relation to each other, so that the stopper has a generally U-shape. When the stopper is inserted into the cord receiving

hole portion, the pair of plate-like portions fix the optical fiber cord along the axis of the optical fiber cord.

Claim 3 is directed to the stopper, wherein the side edge of the positioning slit for the each of the blade portions projects a gable wedge having a cross-section corner along a thickness midline of the side edge for the each of the blade portions, the cross-section corner extending toward the positioning slit.

Also, claim 4 is directed to the stopper, wherein the distal end edge of the plate-like portion slants from a first cross-section face of the plate-like portion to a second cross-section face of the plate-like portion.

C. The Rejections

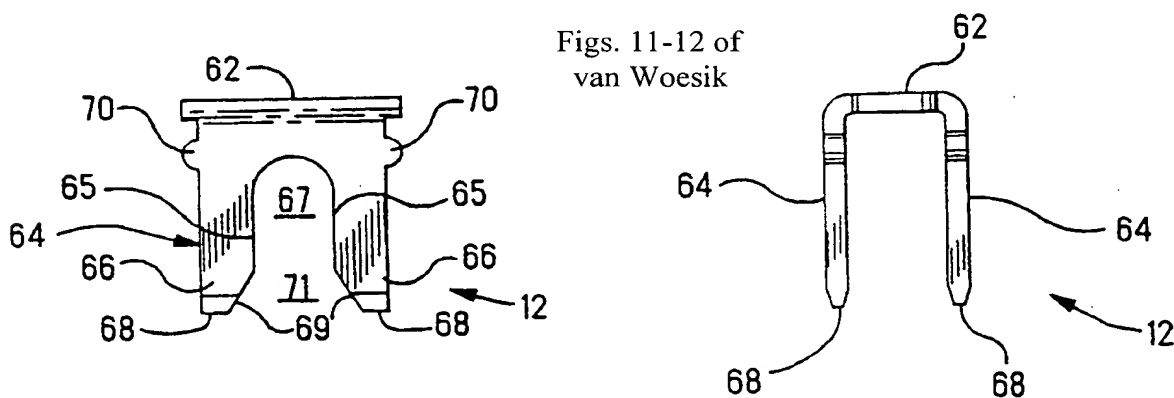
The November 13, 2003 Final Office Action finally rejects claims 1-4 under 35 U.S.C. §103(a) as obvious over van Woesik and Herrmann.

Claim 5 is deemed allowable, and is objected to for depending from a rejected claim.

D. The Applied References

1. U.S. Patent 5,452,386 to van Woesik

U.S. Patent 5,452,386 to van Woesik (hereinafter, "van Woesik") discloses a clip 12 having a pair of plates 64 connected by a base 62. In particular, van Woesik teaches that each plate 64 having a pair of legs 66 separated by a slit 67 and ending in chamfered blades 68. See col. 4, line 63 – col. 5, line 6 and col. 5, lines 50-66 and Figs. 11-12 of van Woesik.



Further, van Woesik teaches that the clip 12 includes retention pips 70 to engage with the walls of the slots 33 on the housing 4 for securing the clip 12. However, the slots 33 fail to describe any means on the housing 4 to secure the retention pips 70 during insertion of the clip 12. See col. 5, line 67 – col. 6, line 5 and Figs. 18 and 19 of van Woesik.

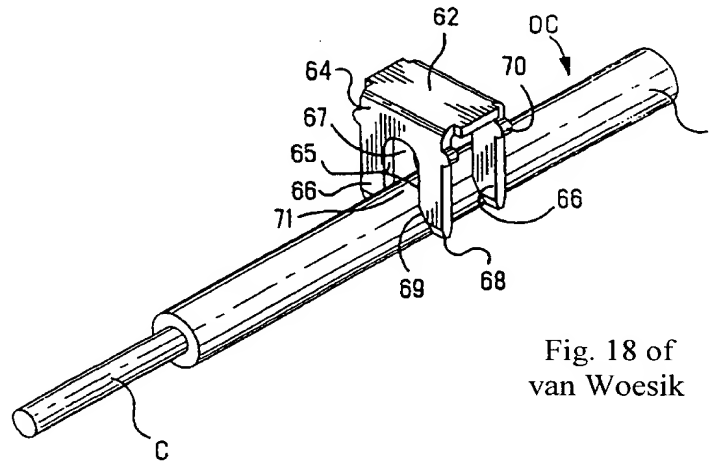
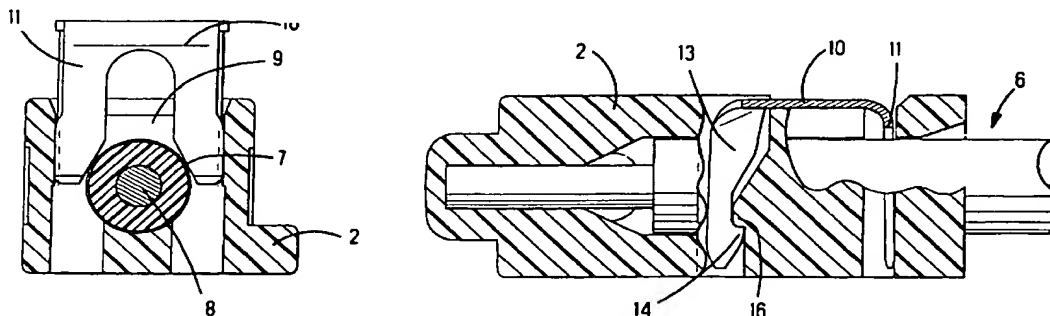


Fig. 18 of
van Woesik

2. U.S. Patent 6,174,191 to Herrmann

U.S. Patent 6,174,091 B1 to Herrmann (hereinafter “Herrmann”) discloses a fiber optic connector having a fiber holding clip 10 inserted into a connector housing 2 through an opening 9. In particular, Herrmann teaches that the clip 10 includes a first limb 11 with chamfered limbs to pierce an insulating sheath 7 protecting an optical waveguide 8 of a fiber optic cable 6, and a second limb 13 with two parts each having a latching hook 14 that engages the housing 2 at a latching lug 16 along a cross-section interface that is parallel to the direction of fiber optic cable insertion. See col. 2, lines 40-60, col. 3, lines 11-16 and Figs. 2-5 of Herrmann.

Figs. 3-4 of Herrmann



III. THE ISSUES ON APPEAL

1. Whether the subject matter of claims 1-4 would have been obvious under 35 U.S.C. §103(a) over van Woesik in view of Herrmann.

IV. GROUPING OF CLAIMS ON APPEAL

Each claim of this patent application is separately patentable, and upon issuance of a patent will be entitled to separate presumption of validity under 35 U.S.C. §282. For the convenience in the handling of this Appeal, the claims are grouped as follows:

Group I, claims 1 and 2;

Group II, claim 3; and

Group III, claim 4.

Each of Groups I-III are argued separately in the following arguments. The groups do not fall or stand together.

V. LAW

A. Law Regarding Factual Inquiries to Determine Obviousness

In rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, *e.g.*, *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal Inc. v. F-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 825 (1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), *cert.*

denied, 475 U.S. 1017 (1986); *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970).

All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). It is well settled that a rejection based on 35 U.S.C. §103 must rest on a factual basis, which the Patent and Trademark Office has the initial duty of supplying. *In re GPAC, Inc.*, 57 F.3d 1573, 1582, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995). A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998).

This evidence may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. See *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). However, the suggestion more often comes from the teachings of the pertinent references. See *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See *In re Dembiczak*, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617. However, the

suggestion to combine need not be express and “may come from the prior art, as filtered through the knowledge of one skilled in the art.” *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1472, 43 USPQ2d 1481, 1489 (Fed. Cir. 1997).

It is impermissible for an Examiner to engage in hindsight reconstruction of the claimed invention using appellant’s structure as a template and selecting elements from references to fill the page. The references themselves must provide some teaching whereby the appellant’s combination would have been obvious. See *In re Gorman*, 911 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). That is, something in the prior art as a whole must suggest the desirability, and thus obviousness, of making the combination. *In re Beattie*, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984).

B. Law Regarding Claim Interpretation

It is well known that claim construction starts with the language of the claim itself. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996). In fact, the actual words of the claim are the controlling focus, *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344, 47 USPQ2d 1418, 1424 (Fed. Cir. 1998), and every element of a relevant claim is presumed essential. See *Lockwood v. Langendorf United Bakeries, Inc.*, 324 F.2d 82, 139 USPQ 220 (9th Cir. 1963). Therefore, all words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Further, all claim limitations must be considered in determining the scope and manner of operation of a claim. *General Electric Co. v. United States*, 191 USPQ 594, 601 (US Cl.Ct. 1976). One must give effect to all claim limitations. *In re Angstadt and Griffin*, 190 USPQ 214, 217 (CCPA 1976).

VI. ARGUMENT**A. Rejections Under 35 U.S.C. §103****1. Claims 1 and 2 are Not Obvious in View of van Woesik and Herrmann**

The Final Office Action finally rejects claims 1 and 2 under 35 U.S.C. §103(a) as unpatentable over van Woesik in view of Herrmann. Specifically, the Final Office Action asserts that van Woesik discloses an optical connector comprising a housing and a stopper having the features as substantially recited in claims 1 and 2. However, the Final Office Action asserts that the blade portion of the van Woesik clip inherently removes a portion of the covering portion when the clip is inserted into housing to hold the optical fiber.

The Final Office Action admits that van Woesik does not disclose joining the side and distal end edges at a right angle. However, the Final Office Action asserts that only routine skill in the art is needed to modify Herrmann, as a matter of design choice, to form such a blade-like portion. The Final Office Action further asserts that Appellant has not explained the solution to any stated problem or purpose for the right-angle edge joint. In other words, the Final Office Action asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify van Woesik by routine skill in the art, and/or combine with Herrmann to achieve the features recited in claims 1 and 2.

Appellant respectfully disagrees and submits that van Woesik teaches chamfered limbs 68 for their blades 64 to produce oblique cutting edges 69, in contrast to Appellant's features for claim 1. See Fig. 11 of van Woesik.

This argument is also applicable to Herrmann, which teaches chamfered first limbs 11 of the clip 10. See Fig. 3 of Herrmann. As with van Woesik, Herrmann provides free-end tips of the first limbs 11 that do not touch the sheath 7 of the waveguide 8. Thus, both van Woesik and Herrmann teach away from Appellant's claimed features.

Further, Appellant discloses that a right angle corner at the edge portion (43a) is particularly desirable to avoid radial compression of the optical fiber (91) in the cord (90). By comparison, chamfered limbs would squeeze against rather than cut through the covering portion (92), thereby causing fiber transmission degradation. See page 13, line 17 – page 14, line 7, page 16, lines 2-22 and Fig. 8B. Therefore, such features do not represent mere design choices and are not obvious in view of van Woesik and Herrmann.

Appellant further asserts that neither van Woesik nor Herrmann, alone or in combination, teaches or suggests an optical connector including, *inter alia*, a housing having a cord receiving hole portion and a mounting hole, the cord receiving hole portion receiving an optical fiber cord to be inserted along an axis of the optical fiber cord in a cord insertion direction, and a stopper including a plate-like portion having a positioning slit between blade portions, as provided in claim 1. Each of the blade portions being formed by a side edge of the positioning slit is joined at a right angle to a distal end edge of the plate-like portion. The housing has stopper retaining portions for holding the plate-like portion of the stopper, the stopper retaining portions engaging a retaining side of the plate-like portion and having a cross-section perpendicular to the cord insertion direction. When the stopper is inserted into the mounting hole along the cord receiving hole portion, the blade portions penetrate into a covering portion of the optical fiber cord, with the positioning slit being perpendicular to the axis of the optical fiber cord, while the blade portions remove a portion of the covering portion, as recited in claim 1.

Instead, van Woesik discloses a clip 12 having a pair of plates 64 connected by a base 62. In particular, van Woesik teaches that each plate 64 has a pair of legs 66 separated by a slit 67 and ends in chamfered blades 68. See col. 4, line 63 – col. 5, line 6 and col. 5, lines 50-66 and Figs. 11-12 of van Woesik. Thus, van Woesik fails to teach or suggest the blade portions of the stopper as having a right angle joining the side edge of the positioning slit and the distal end edge of the plate-like portion, as provided in Appellant's claim 1.

Additionally, the Final Office Action asserts that van Woesik suggests means on the housing 4 to secure the retention pips 70. Appellant respectfully disagrees and submits that van Woesik fails to explicitly teach any mechanism with which to engage the retention pips 70 on the plates 64.

While the clip 12 in van Woesik includes retention pips 70 to engage with the walls of the slots 33 on the housing 4 for securing the clip 12, the slots 33 fail to include any means on the housing 4 to secure the retention pips 70 in place during insertion of the clip 12. See col. 5, line 67 – col. 6, line 5 and Figs. 18 and 19 of van Woesik. Thus, van Woesik does not teach the stopper retaining portions, as provided in Appellant's claim 1.

Herrmann does not compensate for the deficiencies of van Woesik outlined above for claim 1. Instead, Herrmann discloses a fiber optic connector having a fiber holding clip 10 inserted into a connector housing 2 through an opening 9. In particular, Herrmann teaches that the clip 10 includes a first limb 11 with chamfered limbs to pierce an insulating sheath 7 protecting an optical waveguide 8 of an fiber optic cable 6, and a second limb 13 with two parts each having a latching hook 14 that engages the housing 2 at a latching lug 16 along a cross-section interface that is parallel to the direction of fiber optic cable insertion. See col. 2, lines 40-60, col. 3, lines 11-16 and Figs. 2-5 of Herrmann.

The absence of any teaching or suggestion in either van Woesik or Herrmann for joining the distal and side edges at a right-angle mitigates against Appellant's featured configuration as being merely a design choice. Further, the applied references also fail to provide for removing material from the cord covering. Because the blades/limbs of van Woesik and Herrmann are chamfered, as discussed above, the clips of the applied references could be expected to cause the cord covering to deflect away from the blades/limbs. These arguments apply by extension to claim 2, by its dependence from claim 1.

Also, the Final Office Action asserts that van Woesik and Herrmann provide for removing the cord covering because the blade portion would effectively displace the area of

the cut covering portion. Appellant respectfully disagrees and submits that by teaching chamfered blades, van Woesik and Herrmann provide oblique engagement of their blades against the cord sheath. Such tangential contact could induce compressive stresses to the cord sheath rather than incision. In contrast, Appellant provides for forcing the cut portion away from the blade portion (43). See page 15, lines 7-25 and Fig. 10 of the specification.

The Final Office Action responds to the arguments presented in the October 1, 2003 Request for Reconsideration. The Final Office Action asserts that modifying van Woesik to provide blade portions with a right angle joining the side edge of the positioning slit and the distal end of the plate-like portion is obvious as a design choice. The Final Office Action also asserts that van Woesik suggests corresponding means in the housing to engage the retention pips, and that disposing such engagements on the housing wall would be inherent.

The Advisory Action responds to arguments presented in the February 12, 2004 Request for Reconsideration. The Advisory Action asserts that the positioning slit joined at a right angle to a distal end is a functionally equivalent modification of the chamfered blade of van Woesik. The Advisory Action further asserts that Herrmann provides an advantage for chamfered blades with the “ease and smoothness in which the blade pierces through the sheath”, and that removing the chamfer would remove that function, rendering the modification obvious and not patentably distinct from Herrmann.

Appellant responds by referring to the advantages explained in pages 15-16 of Appellant’s specification. In particular, Appellant’s disclosure provides for each blade portion (43) cutting the covering portion (92) while forcing the cut portion away in its inserting direction. Consequently, removing the excess covering portion, instead of merely pushing it away, reduces axial compressive force being applied against the covering portion. Similarly, this removal of the excess covering portion avoids radial compressive force from being applied against the optical fiber (91). This advantage is achieved by a right-angle edge profile, as claimed. See page 16, lines 2-22 of the specification.

In contrast, van Woesik and Herrmann disclose chamfered blades. By merely displacing the covering portion as the van Woesik and Herrmann clips engage the optical cord, such chamfered blades progressively squeeze the optical fiber on either side. There is no teaching or suggestion in van Woesik for such cutting away of the covering portion cut portion, or for any suggestion to provide advantages of this type. Appellant asserts that one of ordinary skill in the art would lack motivation or expectation of success to provide for the cutting away advantage, as well as right-angle blade profile that produces this advantage.

Further, whether or not there exists motivation to combine features related to the chamfered blades of van Woesik with features of the chamfered limbs of Herrmann, the Final Office Action fails to established a *prima facie* case of obviousness based on any combination of the applied references. In particular, even assuming that motivation to combine the applied references is established, the combination fails to teach or suggest Appellant's features in claims 1 and 2.

As explained in MPEP §2143.01, "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Such suggestions for the right-angle edge joints and cutting away of the covering portion are entirely absent in both van Woesik and Herrmann.

Appellant asserts that the Examiner's allegations that it would have been obvious to one of ordinary skill in the art to implement (1) removing a portion of the cord covering by the blade portions as being inherent, and (2) joining the side edge of the slit and the distal edge of the plate-like portion at a right angle as a design choice are merely conclusory statements, and that no support for such statements has been provided. When relying on what is asserted to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. Providing only conclusory statements when dealing

with particular combinations of prior art in specific claims cannot support an assertion of obviousness. *In re Lee*, 61 USPQ 2d 1430, 1434-35 (Fed. Cir. 2002).

Although the Examiner may take official notice of facts outside of the record which are capable of instant and unquestionable demonstration as being “well known” in the art, “if the Applicant traverses such an assertion, the Examiner should cite a reference in support of his or her position.” See MPEP §2144.03. Thus, Appellant submits that the reliance on unsupported *per se* knowledge does not negate the patentability of the subject matter of claims 1 and 2, nor has a *prima facie* case of obviousness been established. Accordingly, Appellant respectfully submits that the basis for the §103 rejection is unreasonable.

A *prima facie* case of obviousness for a §103 rejection requires satisfaction of three basic criteria: there must be some suggestion or motivation either in the references or knowledge generally available to modify the references or combine reference teachings, a reasonable expectation of success, and the references must teach or suggest all the claim limitations. See MPEP §706.02(j).

Appellant respectfully asserts that the Final Office Action has not satisfied this burden with van Woesik and Herrmann because neither reference, nor their combination, teaches or suggests all of Appellant’s claimed features. Nor has the Final Office Action established sufficient motivation to combine or modify the applied teachings or to present a *prima facie* case of obviousness.

Even if such motivation were established, the Final Office Action has not shown any expectation of success that such modifications would achieve Appellant’s claimed features or provide the derived advantages as explained in Appellant’s specification. Appellant respectfully submits that motivation for such modifications is lacking, as is an expectation of success for such a teaching, absent Appellant’s disclosure. Such modifications, far from being design choices involving only routine skill, can only be achieved by impermissible hindsight reasoning. Hence, claims 1 and 2 are patentable over these applied references.

For at least these reasons, the combination of van Woesik and Herrmann fails to teach, disclose or suggest all of the features of claims 1 and 2. Thus, the combination of these applied references cannot render obvious the subject matter of these claims under 35 U.S.C. §103(a).

Accordingly, the rejection of claims 1 and 2 under 35 U.S.C. §103(a) as obvious over van Woesik in view of Herrmann is improper and should be reversed.

2. Claim 3 is Not Obvious in View of van Woesik and Herrmann

The Final Office Action finally rejects claim 3 under 35 U.S.C. §103(a) as unpatentable over van Woesik in view of Herrmann. Specifically, the Final Office Action asserts that it would have been obvious to one having ordinary skill in the art at the time the invention was made for the positioning slit's side edge of the blade portions to project a gable wedge. The Final Office Action further asserts that the advantage in providing a sharper blade edge provides motivation, and that such a modification would be functionally equivalent to the recited features in claim 3.

Appellant respectfully disagrees. Neither van Woesik nor Herrmann teaches the optical connector including, *inter alia*, the side edge of the positioning slit for the blade portions each projects a gable wedge along a thickness midline of the side edge for the blade portions, the cross-section corner extending toward the positioning slit, as recited in claim 3 and illustrated in Fig. 11. Instead, van Woesik and Herrmann both provide flat edges through the thickness of their respective clips. See Fig. 4 of Herrmann and Fig. 12 of van Woesik.

Further, whether or not there exists motivation to combine features related to the flat edge blade of van Woesik with the flat edge blade of Herrmann, the Final Office Action fails to establish a *prima facie* case of obviousness based on any combination of the applied references. In particular, even assuming that motivation to combine the applied references is established, the combination fails to teach or suggest Appellant's features in claim 3.

Regarding the Final Office Action assertion that side edges projecting a gable wedge along a thickness midline of the blade portion side edges is obvious in order to provide a sharp edge for cutting, as recited in claim 3. Appellant submits that there is no teaching or suggestion in van Woesik or Herrmann regarding this gable wedge feature. Side edges for plate-like articles are not customarily provided with cross-section variations through the thickness. See page 17, lines 15-22 and Fig. 11. Instead, the additional cost involved to produce a gabled edge (42Ba) along the positioning slit (42) provides motivation to avoid such a design choice by instead producing thinner articles. The applied references thus teach away from Appellant's recited features for claim 3.

Appellant asserts that the Examiner's allegation that it would have been obvious to one of ordinary skill in the art to implement projecting a gable wedge in the blade portions is merely a conclusory statement, and that no support for such statement has been provided. When relying on what is asserted to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. Providing only conclusory statements when dealing with particular combinations of prior art in specific claims cannot support an assertion of obviousness. *In re Lee*, 61 USPQ 2d 1430, 1434-35 (Fed. Cir. 2002).

Although the Examiner may take official notice of facts outside of the record which are capable of instant and unquestionable demonstration as being "well known" in the art, "if the Applicant traverses such an assertion, the Examiner should cite a reference in support of his or her position." See MPEP §2144.03. Thus, Appellant submits that the reliance on unsupported *per se* knowledge does not negate the patentability of the subject matter of claim 3, nor has a *prima facie* case of obviousness been established. Accordingly, Appellant respectfully submits that the basis for the §103 rejection is unreasonable.

The assertion in the Final Office Action that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings is merely impermissible hindsight reasoning.

For at least these reasons, the combination of van Woesik and Herrmann fails to teach, disclose or suggest all of the features of claim 3. Thus, the combination of these applied references cannot render obvious the subject matter of these claims under 35 U.S.C. §103(a).

Accordingly, the rejection of claim 3 under 35 U.S.C. §103(a) as obvious over van Woesik in view of Herrmann is improper and should be reversed.

3. **Claim 4 is Not Obvious in View of van Woesik and Herrmann**

The Final Office Action finally rejects claim 4 under 35 U.S.C. §103(a) as unpatentable over van Woesik in view of Herrmann. Specifically, the Final Office Action asserts that van Woesik teaches the distal end edge slanting from first and second cross-sections of the plate-like portion.

Appellant respectfully disagrees. Claim 4 recites the optical connector wherein the distal end edge of the plate-like portion slants from a first cross-section face of the plate-like portion to a second cross-section face of the plate-like portion. Both van Woesik and Herrmann, separately or together, fail to disclose this distal end edge slanting across the blade faces, as recited in claim 4, and illustrated in Fig. 12.

Instead, van Woesik provides a tip profile with a chamfered or convex variation from either end of the thickness to the middle. See Fig. 12 of van Woesik. However, van Woesik fails to teach or suggest an edge slant between the blade faces. Also, these deficiencies are not ameliorated by Herrmann. Rather, Herrmann provide straight line outer edges through the limb thickness. Appellant's features in claim 4 provide a sharper edge to cut through the cord covering, and this advantage is absent from the applied references.

Accordingly, Appellant respectfully submits that the basis for the §103 rejection is unreasonable.

In addition, the Final Office Action asserts that the distal end of the plate-like portion of the van Woesik clip 12 slants from a cross-section face of the plate-like portion to a second cross-section of the plate-like portion. Appellant respectfully disagrees and submits that van Woesik teaches the free end portion 68 for clip 12 being tandem chamfered at the tip, as shown in Figs. 12 and 15 of van Woesik. However, such chamfering does not teach or suggest Appellant's claimed features of distal end edge (41Ca) slanting from first to second cross-section faces for claim 4 and illustrated in Fig. 12 of the specification.

Further, whether or not there exists motivation to combine features related to the convex edge blades of van Woesik with the flat edge blades of Herrmann, the Final Office Action fails to establish a *prima facie* case of obviousness based on any combination of the applied references. In particular, even assuming that motivation to combine the applied references is established, the combination fails to teach or suggest Appellant's features in claim 4.

In view of the foregoing, Appellant respectfully submits that no motivation exists to combine and modify the teachings of van Woesik with the teachings of Herrmann. Hence, the Final Office Action has failed to show a *prima facie* case of obviousness to maintain the rejection. The assertion in the Final Office Action that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings is merely impermissible hindsight reasoning.

For at least these reasons, the combination of van Woesik and Herrmann fails to teach, disclose or suggest all of the features of claim 4. Thus, the combination of these applied references cannot render obvious the subject matter of these claims under 35 U.S.C. §103(a).

Accordingly, the rejection of claim 4 under 35 U.S.C. §103(a) as obvious over van Woesik in view of Herrmann is improper and should be reversed.

VII. CONCLUSION

For at least the reasons discussed above, it is respectfully submitted that claims 1-4 are patentably distinguishable over the combination of van Woesik and Herrmann under 35 U.S.C. §103(a).

For the above reasons, Appellant respectfully requests this Honorable Board to reverse the rejections of the claims and to pass this application to issue.

Respectfully submitted,



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Enclosure:

Appendix – Pending Claims

APPENDIX

CLAIMS:

1. (Previously Presented) An optical connector comprising:

a housing having a cord receiving hole portion and a mounting hole, the cord receiving hole portion receiving an optical fiber cord to be inserted along an axis of said optical fiber cord in a cord insertion direction, the mounting hole disposed along said cord receiving hole portion; and

a stopper including a plate-like portion having a positioning slit between blade portions, the positioning slit having a width slightly smaller than a diameter of said optical fiber cord, each of the blade portions being formed by a side edge of said positioning slit joined at a right angle to a distal end edge of said plate-like portion; wherein

said plate-like portion of said stopper can be inserted into said mounting hole along said cord receiving hole portion in a stopper insertion direction perpendicular to the cord insertion direction of said optical fiber cord;

said housing has stopper retaining portions for holding said plate-like portion of said stopper, said stopper retaining portions engaging a retaining side of said plate-like portion and having a cross-section perpendicular to the cord insertion direction of said optical fiber cord; and

when said stopper is inserted into said mounting hole along said cord receiving hole portion, said each of said blade portions penetrates into a covering portion of said optical fiber cord, with the positioning slit being perpendicular to the axis of said optical fiber cord, while said each of the blade portions removes a portion of said covering portion, thereby fixing said optical fiber cord along the axis of said optical fiber cord.
2. (Previously Presented) An optical connector according to claim 1, wherein said stopper includes a pair of said plate-like portions interconnected by an interconnecting

piece portion in parallel relation to each other, so that said stopper has a generally U-shape when viewed from a side thereof; and

when said stopper is inserted into said cord receiving hole portion, said pair of plate-like portions fixing said optical fiber cord along the axis of said optical fiber cord.

3. (Previously Presented) An optical connector according to claim 1, wherein the side edge of said positioning slit for said each of the blade portions projects a gable wedge having a cross-section corner along a thickness midline of the side edge for said each of the blade portions, the cross-section corner extending toward said positioning slit.

4. (Previously Presented) An optical connector according to claim 1, wherein the distal end edge of said plate-like portion slants from a first cross-section face of said plate-like portion to a second cross-section face of said plate-like portion.

5. (Original) An optical connector according to claim 1, in which reverse blades are formed on and project from each of the opposed side edges of said positioning slit toward the inside of said positioning slit, said reverse blades being directed in a direction generally opposite to the direction of insertion of said plate-like portion.